

10. Acronyms

Acronym	Definition
°C	Degrees Celsius
°K	Temperature in degrees Kelvin
1-D	One-Dimensional
3D	Three Dimensional
3-DEP	Three Dimensional Engineered Preform
A	Ampere
A/C	Air Conditioning
ABR	Advanced Battery Research
AC	Alternating Current
ACEC	Advanced Combustion and Emissions Control
ADA	Americans with Disabilities Act
ADOPT	Automotive Deployment Options Projection Tool
ADVISOR	Advanced Vehicle Simulator
AEC	Advanced Engine Combustion
AEV	All Electric Vehicle
AFR	Air to Fuel Ratio
AFV	Alternative Fuel Vehicle
AGMA	American Gear Manufacturers Association
Ah	Ampere-hour
AHD	Advanced Hybrid Drives
AHSS	Advanced High Strength Steel
Al	Aluminum
ALD	Atomic Layer Deposition
AMI	Advanced Metering Infrastructure
AMOX	Ammonia Oxidation
AMR	Annual Merit Review
ANL	Argonne National Laboratory
ANSI	American National Standards Institute
AP	Atmospheric Processing
APBF	Advanced Petroleum-Based Fuels
APE	Advanced Power Electronics
APEEM	Advanced Power Electronics and Electric Machines Program
APRF	Advanced Powertrain Research Facility (Argonne National Laboratory)
APS	Advanced photon source
APU	Auxiliary Power Unit
ARB	Air Resources Board
ARPA-E	Advanced Research Projects Agency - Energy
ARRA	American Recovery and Reinvestment Act

Acronym	Definition
ASI	Area-specific Impedance
ASTM	American Society for Testing and Materials
AT-PZEV	Advanced Technology Partial Zero Emissions Vehicle
ATR	Attenuated Total Reflectance
Au	Gold
AVFL	Advanced Vehicle/Fuel/Lubricant Committee
AVFL-18	Project 18 under Advanced Vehicle/Fuel/Lubricants of the Coordinating Research Council
AVTA	Advanced Vehicle Testing Activity
AVTE	Advanced Vehicle Testing and Evaluation
AXP	Automotive X-Prize
B	Boron
B100	Biodiesel blend of 100% neat biodiesel
B20	Biodiesel blend of 20% neat biodiesel
BAAQMD	Bay Area Air Quality Management District
BatPac	Battery Pack
BATT	Batteries for Advanced Transportation Technologies
BES	DOE Basic Energy Sciences
BEV	Battery Electric Vehicle
Bi₂Te₃	Bismuth Telluride
BIM	Bonded Interface Material
BMEP	Brake Mean Effective Pressure
BMS	Battery Management System
BNL	Brookhaven National Laboratory
BOL	Beginning of Life
BOM	Bill of Material
BSFC	Brake-specific fuel consumption
BSNO_x	Brake-specific NO _x
BSPM	Brake-specific Particulate Matter
BTE	Brake Thermal Efficiency
C	Carbon
C/S	Codes and Standards
Ca	Calcium
CAEBAT	Computer-Aided Engineering of Batteries
CAFE	Corporate Average Fuel Economy
CALPHAD	Computer Coupling of Phase Diagrams and Thermochemistry
CAN	Controller Area Network
CARB	California Air Resources Board
CB	Carbon Black
CCET	Center for Commercialization of Electric Technologies
CD	Charge Depleting
CE	Coulombic Efficiency

Acronym	Definition
CEC	California Energy Commission
CEC	Clean Energy Coalition
CEO	Colorado Energy Office
CF	Carbon Fiber
CFD	Computational Fluid Dynamics
CFTF	Carbon Fiber Technology Facility
CI	Compression Ignition
CLEERS	Cross-Cut Lean Exhaust Emissions Reduction Simulation
CMAQ	Congestion Mitigation and Air Quality Program
CMC	Carboxymethyl Cellulose
CNG	Compressed Natural Gas
CNT	Carbon Nanotubes
Co	Cobalt
CO	Carbon Monoxide
CO₂	Carbon Dioxide
COG	Councils of Government
COP	Coefficient of performance
COTS	Commercial-Off-the-Shelf
CPES	Virginia Polytechnic Institute Center for Power Electronics Systems
CPUC	California Public Utilities Commission
Cr	Chromium
CR	Compression Ratio
CRADA	Cooperative Research and Development Agreement
CRC	Coordinating Research Council
CS	Charge Sustaining
CSS	Cascade Sierra Solutions
CTE	Coefficient of Thermal Expansion
CTE	Center for Transportation and the Environment
CTQ	Critical to Quality
Cu	Copper
CUICAR	Clemson University International Center for Automotive Research
CY	Calendar Year
D3	Downloadable Dynamometer Database
DASI	Diesel-Assisted Spark Ignition
dB	Decibel
DBA	Direct Bonded Aluminum
DBC	Direct Bonded Copper
DC	Direct Current
DCFC	Direct Current Fast Chargers
DDC	Detroit Diesel Corporation
D-EGR	Dedicated-Exhaust Gas Recirculation

Acronym	Definition
DEIS	Directed Energy Ignition System
DERC	Diesel Engine Research Consortium
DEWGS	Domain Expert Working Groups
DF	Dissipation Factor
DFT	United Kingdom Department for Transport
DFT	Density Functional Theory
DI	Direct Injection
DIC	Digital Image Correlation
DISI	Direct Injection Spark Ignited
DME	Dimethyl Ether
DMME	Department of Mines, Minerals and Energy (Virginia)
DMP	Diesel-Micro-Pilot Ignition
DOC	Diesel Oxidation Catalyst
DOE	U.S. Department of Energy
DoE	Design of Experiment
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
DPC	Diphosphinato Catecholate
DPF	Diesel particulate filter
DR	Demand Response
DRGS	Distributed Renewables, Generation, & Storage
DSC	Differential Scanning Calorimetry
DSNY	City of New York Department of Sanitation
DSRC	Dedicated Short-Range Communications
DV	Design Validation
DVRPC	Delaware Valley Regional Planning Commission
E0	0% Ethanol blend with gasoline
E10	10% Ethanol blend with gasoline
E20	20% Ethanol blend with gasoline
E30	30% Ethanol blend with gasoline
E70	70% Ethanol blend with gasoline
E85	85% Ethanol blend with gasoline
E100	100% Ethanol
EC	Ethylene Carbonate
ECI	Electronic Concepts, Inc.
ECN	Engine Collaboration Network
ED/AX	Energy Dispersive Analysis of X-Rays
EDS	Energy Dispersive X-ray Spectroscopy
EDV	Electric Drive Vehicle
EELS	Electron Energy Loss Spectroscopy
EGR	Exhaust Gas Recirculation

Acronym	Definition
EH&S	Environmental Health and Safety
EHN	2-Ethylhexyl Nitrate
EIA	Energy Information Administration
EIL	Engines in the Loop
EIS	Electrochemical Impedance Spectroscopy
EISA	Energy Independence and Security Act of 2007
EMA	Engine Manufacturers Association
EMC	Ethyl Methyl Carbonate
EOL	End of Life
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
EPC	Efficient Power Conversion
EPR	Electron Paramagnetic Resonance
EPRI	Electric Power Research Institute
EQR	Equivalence Ratio
ERC	Engine Research Center
ERCOT	Electric Reliability Council of Texas
EREV	Extended Range Electric Vehicle
ES	Energy Storage
ESEM	Environmental Scanning Electron Microscopy
ESI	Electronically Stored Information
ESR	Equivalent Series Resistance
ESS	Energy Storage System
EtOH	Ethanol
EV	Electric Vehicle
EVSE	Electric Vehicle Supplemental (Supply) Equipment
EVSP	Electric Vehicles Standards Panel
EVWPT	Electric Vehicle Wireless Power Transfer
EXAFS	Extended X-ray Absorption Fine Structure
F	Fluorine
FACE	Fuels for Advanced Combustion Engines
FAME	Fatty Acid Methyl Ester
FASTSim	Future Automotive Systems Technology Simulator
FAT	Fleet Analysis Tool
FCTO	Fuel Cell Technologies Office
FE	Finite Element
FE	Fuel Economy
Fe	Iron
FEA	Finite Element Analysis
FEM	Finite Element Method
FEMA	Failure Mode and Effects Analysis

Acronym	Definition
FEVER	Fostering Electric Vehicle Expansion to the Rockies
FF	Flex Fuel
FFRDC	Federally Funded Research and Development Center
FFV	Flex-Fuel Vehicles
FHWA	Federal Highway Administration
FIB	Focused Ion Beam
FMCSA	Federal Motor Carrier Safety Administration
FMEP	Friction mean effective pressure
FMVSS	Federal Motor Vehicle Safety Standards
FOA	Funding Opportunity Announcement
FPE	Free-piston engine
FPL	Florida Power and Light
FRION	Flame Retardant Electrolyte Ions
FSP	Friction Stir Processing
FSW	Friction Stir Welding
FTIR	Fourier Transform Infrared Spectroscopy
FTP	Federal Test Procedure
FY	Fiscal Year
GA	Genetic Algorithm
GaN	Gallium Nitride
GATE	Graduate Automotive Technology Education
GDCI	Gasoline Direct Compression Engine
GDI	Gasoline Direct Injection
GE	General Electric
GEM	Greenhouse Gas Emissions Model
GEN 2	Generation 2
GHG	Greenhouse Gas
GIS	Geographic Information System
GM	General Motors Corporation
GMZ	GMZ Energy Inc.
GPF	Gasoline Particulate Filter
GPRA	Government Performance and Results Act
GPS	Global Positioning System
GPU	Graphics Processing Unit
GREET	Greenhouse Gas, Regulated Emissions, and Energy Use in Transportation
GS	Grain Size
GSA	General Services Administration
GTDI	Gasoline Turbocharged Direct Injection
GTI	Gas Technology Institute
GTRI	Georgia Tech Research Institute
GUI	Graphical User Interface

Acronym	Definition
GVL	Ester Solvent
GVPD	Global Vehicle Development Process
GWh	Gigawatt hours
GWP	Global Warming Potential
H₂	Hydrogen
H₂O	Water
HAADF	High-Angle Annular Dark-Field
HADA	Hawai'i Auto Dealers Association
HALT	Highly Accelerated Life Test
HAN	Home Area Network
HATCI	Hyundai America Technical Center Inc.
HC	Hydrocarbon
HCA	High-capacity Anode
HCC	High-capacity Cathode
HCCI	Homogeneous Charge Compression Ignition
HCFS	High-Pressure Common-Rail Fuel-Supply System
HD	Heavy-Duty
HE	High Energy
HECC	High Efficiency Clean Combustion
HEDGE	High-Efficiency Dilute Gasoline Engine
HEPF	Hawai'i Energy Policy Forum
HERDV	Hawai'i Renewable Energy Development Venture
HEV	Hybrid Electric Vehicle
HEVN	Hawaiian Electric Vehicle Network
Hf	Hafnium
HH	Half-Heusler
HIL	Hardware-in-the-loop
HMI	Human-to-Machine Interface
HNEI	Hawai'i Natural Energy Institute
HOA	Home Owners Associations
HPC	High Performance Computing
HPDC	High Pressure Die Cast
HPLB	High-pressure, lean burn
HRSXRD	High-resolution Synchrotron X-ray Diffraction
HS	High Strength
HTML	High Temperature Materials Laboratory
HV	High Voltage
HVAC	Heating, Ventilation and Air Conditioning
HVC	High Voltage Cathode
HVM	High-Volume Manufacturing
HWFET	Highway Fuel Economy Test

Acronym	Definition
HyTrans	Hydrogen Transition
IAB	Industry Advisory Board
IAC	International Automotive Components
IBEW	International Brotherhood of Electrical Workers
IC	Internal Combustion
ICCT	International Council on Clean Transportation
ICE	Internal Combustion Engine
ICME	Integrated Computational Materials Engineering
IEA	International Energy Agency
IEEE	Institute of Electrical and Electronics Engineers
IGBT	Insulated Gate Bipolar Transistor
IL	Ionic Liquids
IMEP	Indicated Mean Effective Pressure
INL	Idaho National Laboratory
IP	Induction Period
IP	Intellectual Property
IPM	Interior Permanent Magnet
IPO	Initial Public Offering
IQT	Ignition Quality Tester
iR	Insulation Resistance
IR	Infrared
IREQ	Institut de Recherche d'Hydro-Québec
ISFC	Indicated Specific Fuel Consumption
ISO	International Organization for Standardization
ITE	Indicated Thermal Efficiency
ITS	Intelligent Transportation Systems
ITS JPO	Intelligent Transportation Systems Joint Program Office
JCI	Johnson Controls, Inc.
JPL	Jet Propulsion Laboratory
K	Potassium
KASIT	Korea Advanced Institute of Science and Technology
KIVA	Computational Fluid Dynamics Modeling Software
Kn	Knudsen Number
KSI	Kips per Square Foot
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt Hour
L/P	Lignin/PAN Polymer Blend Precursor
LANL	Los Alamos National Laboratory
LBMP	Lithium-Bearing Mixed Polyanion
LBNL	Lawrence Berkeley National Laboratory

Acronym	Definition
LCA	Life-Cycle Analyses Analysis
LCCF	Low-Cost Carbon Fibers
LCD	Levelized Cost of Driving
LCFS	Low Carbon Fuel Standard
LD	Light-Duty
LDB	Lean Downsized Boosted
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LEESS	Lower-Energy Energy Storage System
LES	Large Eddy Simulation
LEV	Low Emission Vehicle
LFO	Lithium Iron Oxide
LFP	Lithium Iron Phosphate
Li	Lithium
Li ₂ MnO ₃	Lithiated transition metal oxides
LiBF ₄	Lithium tetrafluoroborate
LiBOB	Lithium bis(oxalato)borate
LII	Laser Induced Incandescence
Li-Ion	Lithium Ion
LiPF ₆	Effective electrolyte salt for lithium-ion battery
LiPON	Lithium Phosphorous Oxynitride
LiTFSI	Lithium Bis(Trifluoromethanesulfonyl)Imide
LLFC	Lean Lifted Flame Combustion
LLNL	Lawrence Livermore National Laboratory
LMNO	Ni-substituted manganese spinel oxides
LMR	Lithium Manganese Rich
LNG	Liquid Natural Gas
LNT	Lean NO _x Trap
LRIP	Low Rate Initial Production
LRRI	Lovelace Respiratory Research Institute
LT	Low Temperature
LTC	Low Temperature Combustion
LTT	Low Transformation Temperature
MA	Maleic Anhydride
MA3T	Market Assessment of Advanced Automotive Technologies
MAP	Microwave Assisted Plasma
MATLAB	Numerical Analysis Software
MB	Methyl Butyrate
MB	Mercedes Benz
MCH	Methylcyclohexane
MD	Medium-Duty

Acronym	Definition
MDU	Multiple-Dwelling Unit
MEC	Metropolitan Energy Center
MEDC	Michigan Economic Development Corporation
MEMS	Micro-Electro-Mechanical Systems
MENA	Magnesium Electron North America
MEO	Maui Economic Opportunity, Inc.
MERF	Materials Engineering Research Facility (Argonne National Laboratory)
Mg	Magnesium
MgO	Magnesium oxide or Magnesia
MgOH2	Magnesium Hydroxide
MHLA	Maui Hotel and Lodging Association
MIT	Massachusetts Institute of Technology
mJ	Millijoule
MLD	Molecular Layer Deposition
Mn	Manganese
Mo	Molybdenum
MOS	Metal-Oxide-Semiconductor
MOSFET	Metal Oxide Semiconductor Field Effect Transistor
MOU	Memorandum of Understanding
MOxST	Metal Oxygen Separation Technologies, Inc.
MPa	Megapascal
MPC	Model Predictive Controller
MPG	Miles Per Gallon
MPO	Metropolitan Planning Organization
MSU	Michigan State University
MTBE	Methyl Tertiary Butyl Ether
MTU	Michigan Technological University
MUD	Multi-Unit Dwelling
MW	Molecular Weight
MWh	Megawatt-hour
MXene	Exfoliated MAX phases (2D structures)
N₂O	Nitrous Oxide
NASA	National Aeronautics and Space Administration
NASEO	National Association of State Energy Officials
NBB	National Biodiesel Board
NC	North Carolina
NCA	Battery cathode material (nickel cobalt aluminum oxide)
NCM	Nickel Cobalt Manganese Oxide
NCSU	North Carolina State University
Nd	Neodymium
NDE	Non-Destructive Evaluation

Acronym	Definition
NDT	Non-Destructive Testing
NETL	National Energy Technology Laboratory
NF	Nanofiber
NGOs	Non-Government Organizations
NH₃	Ammonia
NHTS	National Household Travel Survey
NHTSA	National Highway Traffic Safety Administration
Ni	Nickel
NIST	National Institute of Standards and Technology
Nm	Newton-meters
NMC	Nickel Manganese Cobalt Oxide
NMP	N-Methylpyrrolidone
NMR	Nuclear Magnetic Resonance
NO	Nitric Oxide
NO₂	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
NPBFL	Non-Petroleum-Based Fuels and Lubricants
NREL	National Renewable Energy Laboratory
NSC	NO _x Storage Catalyst
NSF	National Science Foundation
NSR	NO _x Storage Reduction
NTRC	National Transportation Research Center
NVO	Negative Valve Overlap
NYCLHVCC	New York City and Lower Hudson Valley Clean Communities, Inc.
NYPA	New York Power Authority
NYSERDA	New York State Energy Research and Development Authority
O	Oxygen
O&M	Operations and Maintenance
O₂	Oxygen
OBD	On-Board Diagnostics
OCV	Open Current Voltage
OEM	Original Equipment Manufacturer
OH	Hydroxide
ONR	Office of Naval Research
ORISE	Oak Ridge Institute for Science and Education
ORNL	Oak Ridge National Laboratory
OSC	Oxygen storage capacity
OSU	Ohio State University
OTR	On the Road
P	Phosphorous
PACCAR	Commercial Vehicle Manufacturer (Kenworth, Peterbilt, DAF)

Acronym	Definition
PAN	Polyacrylonitrile
PCCI	Premixed Charge Compression Ignition
Pd	Palladium
PDF	Pair Distribution Function
PE	Power Enrichment
PEEM	Power Electronics and Electric Machines
PEN	Polyethylene Naphthalate
PET	Polyethylene Terephthalate
PEV	Plug-in Electric Vehicle
PFI	Port Fuel Injection
PGM	Platinum group metal
PHEV	Plug-In Hybrid Electric Vehicle
PHEV10	Plug-In Hybrid Electric Vehicle with a 10-mile range on a single charge
PHEV40	Plug-In Hybrid Electric Vehicle with a 40-mile range on a single charge
PI	Principal Investigator
PIV	Particle Image Velocimetry
PLC	Programmable Logic Controller
PLZT	Lead Zirconium Titanate
PM	Permanent Magnet
PM	Particulate Matter
PN	Particulate Number
PNNL	Pacific Northwest National Laboratory
PP	Polypropylene
PPC	Partially Premixed Combustion
PPG	Pittsburgh Plate Glass Company
PRC	People's Republic of China
PRF	Primary Reference Fuels
PSC	Public Service Commission
PSU	Penn State University
Pt	Platinum
PTO	Power Take Off
PUC	Public Utilities Commission
PWM	Pulse Width Modulation
PZEV	Partial Zero Emissions Vehicle
PZT	Lead Zirconate Titanate
Q&A	Question and Answer
QA	Quality Assurance
QC	Quality Control
R&D	Research and Development
RANS	Reynolds-Averaged Navier Strokes
RAQC	Regional Air Quality Council

Acronym	Definition
RCCI	Reactivity Controlled Compression Ignition
RCM	Rapid compression machines
RE	Rare Earth
RF	Radio Frequency
RESS	Regenerative Energy Storage System
REVi	Richmond Electric Vehicle Initiative
RFA	Renewable Fuels Association
RGGI	Regional Greenhouse Gas Initiative
RI	Ringling Intensity
ROI	Return on Investment
RON	Research Octane Number
RPM	Rotations per Minute
RT	Room Temperature
Ru	Ruthenium
RVP	Reid Vapor Pressure
S	Sulfur
SA	Standards Association
SACI	Spark assisted compression ignition
SAE	Society of Automotive Engineers
SBR	Styrene Butadiene Rubber (Copolymer)
SCAQMD	South Coast Air Quality Management District
SCE	Single Cylinder Engine
SCR	Selective Catalytic Reduction
SCTE	Single Cylinder Test Engine
SDG&E	San Diego Gas and Electric
SEI	Solid Electrolyte Interface
SEM	Scanning Electron Microscope
SEP	Smart Energy Profile
SFTP	Supplemental Federal Test Procedure
SGIP	Smart Grid Interoperability Panel
Si	Silicon
SI	Spark Ignition
Si₃N₄	Silicon nitride
SIC	Single Ion Conducting
SiC	Silicon Carbon
SIDI	Spark Ignition Direct Injection
SIF	Spray-Interactive Flamelet
SIMS	Secondary Ion Mass Spectrometry
SKU	Skutterudite
SMC	Sheet Molding Compound
SMOG	Si/MgO/Graphite

Acronym	Definition
Sn	Tin
SNL	Sandia National Laboratories
SOA	State of the Art
SOC	State of Charge
SOFC	Solid Oxide Fuel Cell
SOI	Scenario of Interest
SOP	Start of Production
SOW	Statement of Work
SpaciMs	Spatially Resolved Capillary Inlet Mass Spectrometer System
SPEEK	Sulfonated Poly Ether Ether Ketone
SPR	Surface Plasmon Resonance
SSHD	Single-Stage Hot Deformation
STEM	Science, Technology, Engineering, and Math
SULEV	Super Low-Emission Vehicle
SUNY	State University of New York
SWRI	Southwest Research Institute
TARDEC	U.S. Army Tank Automotive Research, Development and Engineering Center
TCI	Transportation Climate Initiative
TDC	Top Dead Center
TE	Thermoelectric
TED	Thermoelectric Devices
TEG	Thermoelectric Generator
TEM	Transmission Electron Microscopy
TEMats	Thermoelectric Materials
TFSI	Bis(trifluoromethane)sulfonimide [(CF ₃ SO ₂) ₂ N]
TGA	ThermoGravimetric Analyzer
Ti	Titanium
TIM	Thermal Interface Material
TIM	Time Integrity Modules
TIVCT	Twin Independent Variable Camshaft Timing
TM	Transition Metal
TMA	Tri Methyl Aluminum
TMS	Thermal Management System
TPMS	Tire-Pressure Monitoring System
TRB	Transportation Research Board
TRU	Trailer Refrigeration Unit
TSB	Technology Standard Board
TSE	Truck Stop Electrification
TWB	Tailor Welded Blanks
TWC	Three-Way Catalyst
U.S.	United States of America

Acronym	Definition
U.S. DRIVE	U.S. Driving Research and Innovation for Vehicle Efficiency and Energy sustainability
UC	University of California
UCCS	University of Colorado-Colorado Springs
UDDS	Urban Dynamometer Driving Schedule
UH	University of Hawai'i
UHC	Unburned hydrocarbons
UK	United Kingdom
UL	Underwriters Laboratories
UM	University of Michigan
UMTRI	University of Michigan Transportation Research Institute
UNLV	University of Nevada-Las Vegas
USABC	U.S. Advanced Battery Consortium
USAMP	U.S. Automotive Materials Partnership
USCAR	U.S. Council for Automotive Research
USGBC	U.S. Green Building Council
UV	Ultra Violet
UW	University of Wisconsin
UWM	University of Wisconsin-Milwaukee
V	Vanadium
V	Volt
V2G	Vehicle-to-Grid
V2I	Vehicle-to-Infrastructure
V2V	Vehicle-to-Vehicle
VAN	Vehicle Analysis
VC	Vinylene Carbonate
VCM	Vehicle Choice Model
VCT	Variable Camshaft Timing
VEHMA	Vehma International
VF	Voltage Fade
VMT	Vehicle Miles Traveled
VPSC	Viscoplastic Self-Consistent
VSS	Vehicle and Systems Simulation
VSST	Vehicle and Systems Simulation and Testing
VT	Vehicle Technologies
VTO	Vehicle Technologies Office
VVA	Variable Valve Actuation
W	Watt
W/mK	Watts per Millikelvin
WBG	Wide Bandgap
WERC	Wisconsin Engine Research Consultants
WFO	Work for Others

Acronym	Definition
WH	Waste Heat
WHR	Waste Heat Recovery
WOT	Wide Open Throttle
WPT	Wireless Power Transfer
WSU	Wayne State University
WTW	Well-to-Wheels
XANES	X-ray Absorption Near Edge Spectroscopy
XAS	X-ray Absorption Spectroscopy
XML	Extensible Markup Language
XPS	X-ray Photoelectron Spectroscopy
XRD	X-ray Diffraction (Crystallography)
XRF	X-ray Fluorescence
ZDDP	Zinc Dialkyl-Dithio-Phosphate
ZEV	Zero-Emissions Vehicle
Zn	Zinc
Zr	Zirconium
ZrO₂	Zirconium dioxide
ZT	Thermoelectric Figure of Merit